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*Abstract* :

THIS REPORT DEALS WITH THE DESIGN AND DEVELOPMENT OF AN AIR-TO-AIR EJECTOR TO FACILITATE TESTING OF A 1/3 SCALE AIRCRAFT INTAKE MODEL PROVIDED BY ADA. THE OBJECTIVE WAS TO DEVELOP AN EJECTOR HAVING A MASS AUGMENTATION RATIO OF ABOUT 8, WITH THE PRIMARY AIR FLOW RATE BEING 1 kg/s INJECTING AT A PRESSURE OF ABOUT 0.66 MPa (GAUGE). A SINGLE STAGE, SINGLE NOZZLE, CONSTANT AREA MIXING TYPE OF EJECTOR WAS DEVELOPED FOR THE PURPOSE. THIS EJECTOR HAD TYPICAL L/D RATIO OF ABOUT 7 AND SECONDARY TO PRIMARY AREA RATIO OF ABOUT 60, PRODUCING A MAXIMUM AUGMENTATION RATIO CLOSE TO 7.5.